

FIG. 1

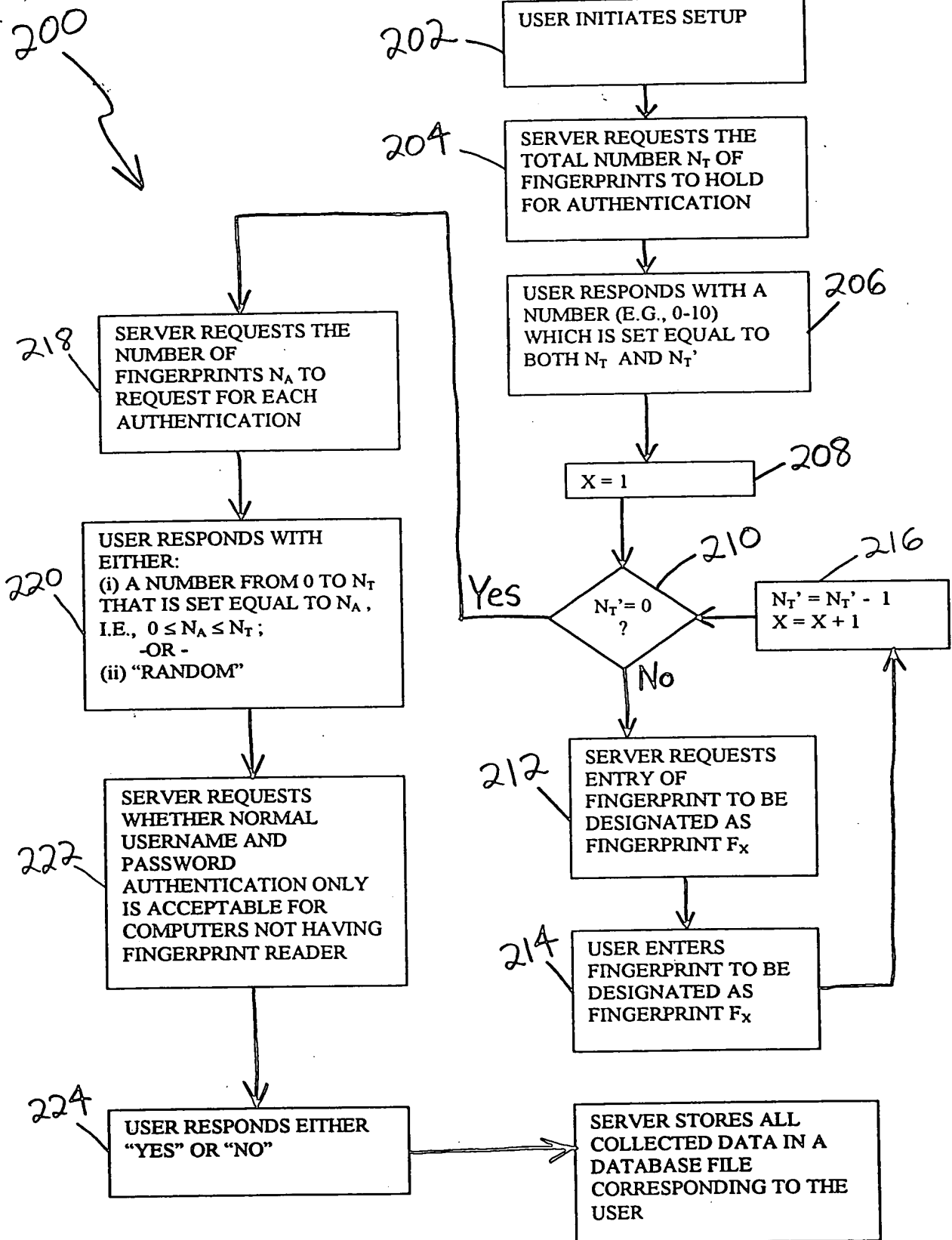


FIG. 2

EXAMPLE SCHEMES	N <sub>T</sub>	LEFT HAND FINGERS					RIGHT HAND FINGERS				
		PINKY	RING	MIDDLE	INDEX	THUMB	THUMB	INDEX	MIDDLE	RING	PINKY
A	5						F <sub>1</sub>	F <sub>2</sub>	F <sub>3</sub>	F <sub>4</sub>	F <sub>5</sub>
B	5	F <sub>2</sub>	F <sub>4</sub>	F <sub>5</sub>	F <sub>1</sub>	F <sub>3</sub>					
C	8	F <sub>7</sub>		F <sub>8</sub>	F <sub>2</sub>	F <sub>1</sub>	F <sub>5</sub>	F <sub>4</sub>		F <sub>6</sub>	F <sub>3</sub>
D	3			F <sub>3</sub>		F <sub>1</sub>				F <sub>2</sub>	
E	10	F <sub>4</sub>	F <sub>9</sub>	F <sub>5</sub>	F <sub>10</sub>	F <sub>1</sub>	F <sub>7</sub>	F <sub>2</sub>	F <sub>6</sub>	F <sub>3</sub>	F <sub>8</sub>
F	14	F <sub>12</sub>	F <sub>4</sub> ,F <sub>13</sub>	F <sub>8</sub>	F <sub>9</sub> ,F <sub>5</sub>	F <sub>3</sub>	F <sub>10</sub>	F <sub>7</sub> ,F <sub>14</sub>	F <sub>1</sub>	F <sub>11</sub>	F <sub>2</sub> ,F <sub>6</sub>

FIG. 3

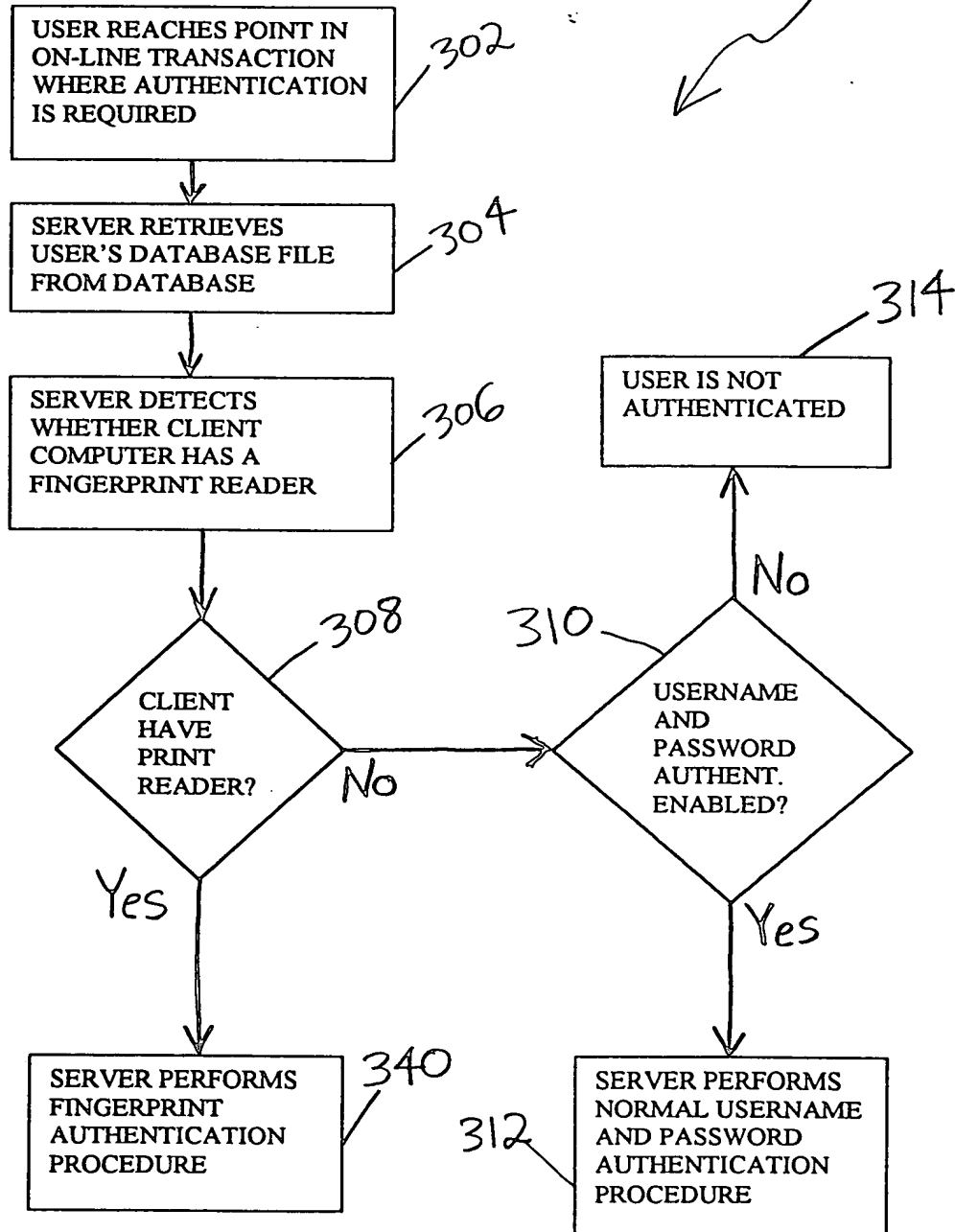


FIG. 4

340

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START

344

DID USER  
DESIGNATE  
 $N_A$  AS  
"RANDOM"?

Yes

No

SERVER RANDOMLY  
SELECTS A NUMBER FROM  
1 TO  $N_T$  AND SETS  $N_A$   
EQUAL TO THE NUMBER

$N_A' = N_A$

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[RANDOM] IS A RANDOM  
INTEGER CHOSEN FROM POOL  
OF AVAILABLE RANDOM NOS.  
INITIALLY DEFINED AS:  
 $1 \leq [\text{RANDOM}] \leq N_T$

352

$N_A' = 0$   
?

Yes

No

360

$N_A' = N_A' - 1$

SERVER COMPARES THE  
ENTERED FINGERPRINTS  
WITH THE  
CORRESPONDING  
FINGERPRINTS ON FILE

364

ALL  
PRINTS  
MATCH  
?

Yes

No

USER IS  
AUTHENTICATED

USER IS NOT  
AUTHENTICATED

354

SERVER REQUESTS  
USER TO PROVIDE  
FINGERPRINT  $F_{[\text{RANDOM}]}$

358

[RANDOM] IS  
REMOVED FROM THE  
POOL OF AVAILABLE  
RANDOM NOS.

USER ENTERS THE  
REQUESTED  
FINGERPRINT  $F_{[\text{RANDOM}]}$

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FIG. 5

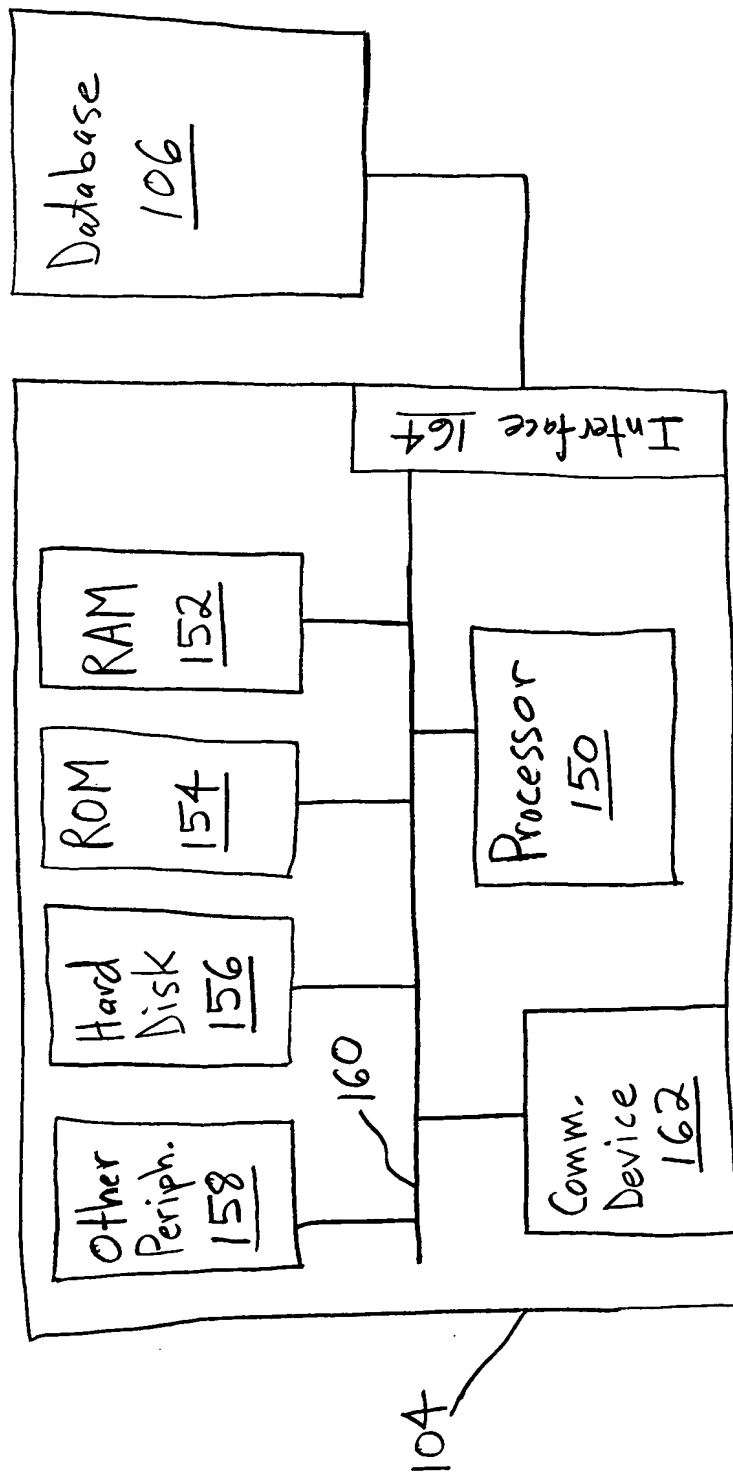


FIG. 6